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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/885,471	06/20/2001	Sang-Wook Cheong	5-1	3875

7590

01/29/2003

Docket Administrator (Room 3J-219)
Lucent Technologies Inc.
101 Crawford's Corner Road
Holmdel, NY 07733

EXAMINER

FULLER, ERIC B

ART UNIT

PAPER NUMBER

1762

DATE MAILED: 01/29/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/885,471

Applicant(s)

CHEONG ET AL.

Examiner

Eric B Fuller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 8, 9, 13, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Satou et al. (US 4,657,774).

Satou teaches a process of evaporating a solid and depositing a film of that solid onto a ceramic substrate (column 3, lines 13-30; column 6, lines 15-20). The evaporation means may be a laser (column 5, lines 20-25). The target may be metallic borides of magnesium (column 5, lines 64-68). The pressures disclosed fall within the applicant's claimed ranges (column 4, line 40). It is the position of the examiner that the limitation of claim 9 is inherent to the process of Satou as the reference teaches all other parameters claimed by the applicant.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Satou et al. (US 4,657,774) as applied to claim 8 above, and further in view of the applicant's admitted prior art and Watanabe et al. (US 4,704,372).

Satou teaches the limitations to claim 8, as shown above, and teaches that the target is a solid mass (column 5, lines 35-60), but fails to teach sintering the target prior to irradiation. However, the applicant has admitted, on page 2 of the specification, that MgB_2 is typically a powder. Watanabe teaches that sintering MgB_2 powder will cause the powder to form a solid mass. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to sinter the powdered MgB_2 such that it is converted into a solid mass.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Satou et al. (US 4,657,774) as applied to claim 8 above, and further in view of Rosen et al. (US 5,820,627).

Satou teaches the limitations of claim 8, as shown above, but fails to teach using a pulsed laser. However, Rosen teaches that pulsed lasers provide more precision and control than continuous lasers (column 1, lines 20-25). Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize a pulsed laser in the process taught by Satou. By doing so, more precision and control is achieved.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Satou et al. (US 4,657,774) as applied to claim 8 above, and further in view of Morimoto et al. (US 4,622,236).

Satou teaches the limitations of claim 8, as shown above, but fails to teach that the substrate is made of the materials claimed by the applicant. However, Morimoto teaches that for thin films that are the same as those taught by Sataou, silica is commonly used as the substrate because it is relatively inexpensive. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize silica as the substrate in Sataou. By doing so, a relatively inexpensive substrate is used. Silmilar results are expected as Satou specifically teaches that the substrate may be "any material such as ceramic...".

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Satou et al. (US 4,657,774).

Satou teaches the limitations to claim 13, but fails to explicitly teach the thickness of the film. However, it is the examiner's position that to use a minimum thickness that still allows for the film to be effective would have been obvious at the time the invention was made to a person having ordinary skill in the art.

Response to Arguments

Applicant argues that Satou fails to teach growing a layer of MgB_2 as is allegedly claimed in claim 8. This argument is unpersuasive. Applicant's claim 8 only reads to form a layer on the substrate from ejected MgB_2 . There is no limitation requiring that the film being deposited is MgB_2 .

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B Fuller whose telephone number is (703) 308-6544. The examiner can normally be reached on Mondays through Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck, can be reached at (703) 308-2333. The fax phone numbers

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for the organization where this application or proceeding is assigned are 703 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



EBF

January 26, 2003



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